

CADMIUM, ARSENIC and LEAD

EXPOSURE INVESTIGATION in Herculaneum, MO

What is an exposure investigation?

During an exposure investigation, ATSDR/MDHSS tests the environment, people, and gathers other information to see:

- ◆ if there is contamination that people can come in contact with;
- ◆ if the contamination is in people; and
- ◆ if it is a public health problem.

Tell me what this exposure investigation CAN and CANNOT do.

This exposure investigation CAN:

- ◆ Find how much of a chemical is in a person or thing
- ◆ Provide information to decrease exposure to a chemical
- ◆ If a problem is found, it can lead to more public health activities

This exposure investigation CANNOT:

- ◆ Tell a person if the chemical in their body can cause or is the cause of a health problem
- ◆ Provide medical care or treatment
- ◆ Tell a person where the chemical came from, for example from food, smoke, air, soil, dust

Why are ATSDR/MDHSS doing an exposure investigation?

In November 2002, ATSDR and MDHSS reviewed information on the air and soil/dust testing of arsenic and cadmium in Herculaneum.

Cadmium in people

We concluded that the most recent cadmium air, dust and soil testing does not pose a health hazard to people in Herculaneum. However, we do not know if past levels of cadmium in the air/dust/soil could be a health problem. We can test a person's urine and find out how much cadmium a person has been exposed to from the past.

Cadmium builds up in the body with time. It mostly builds up in the kidney. By testing for cadmium in urine, we can see how much cadmium a person has in their body from the past. Everyone has some cadmium in his or her body, usually from cigarette smoke and some foods.

Arsenic in people

We concluded that the most recent air, dust and soil testing for arsenic does not pose a health hazard to people in Herculaneum. However, some people are still concerned about the arsenic exposure. Because we do not think that the current arsenic levels in the environment are a health hazard, we are offering this testing as a service to ease concerns about arsenic.

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Arsenic in people (continued)

A person will get urine arsenic testing three separate times over the next few months. Urine arsenic testing can only tell us about exposure to arsenic for the past few days. By repeating urine arsenic tests three different times over a few months, a person will get a better understanding of their exposure to arsenic over a longer time period. We cannot tell people about arsenic exposure in the past few months or years. This is because urine tests only measure arsenic exposure in the past few days. There is no good test available that can look for past arsenic exposure over months or years.

Vegetables for cadmium, arsenic and lead

Recent testing of cadmium, arsenic, and lead in the soil, air, and dust has been done in Herculaneum. Some people in Herculaneum want to know if home grown vegetables are safe to eat if these metals (cadmium, arsenic, and lead) are in the environment. By testing for these metals in home grown vegetables we can find out if they are safe to eat and also tell people about ways to reduce their exposure to these metals from home grown vegetables.

Who can participate?

People can have cadmium and arsenic tested in their urine if they:

- ◆ Are 10 years of age or older
- ◆ Live within ½ mile of the smelter
- ◆ No history of current or past occupational exposure to cadmium or arsenic
- ◆ Live in a non-remediated home (yard and interior of home)
- ◆ Meet more specific eligibility criteria

People can have homegrown vegetables tested for cadmium, arsenic, and lead if they:

- ◆ Live within ½ mile of the smelter
- ◆ Provide home grown vegetables
(Green leafy vegetables and root vegetables are preferred over fruits.)

How many people can be tested?

Cadmium urine testing: 30 people

Arsenic urine testing: 30 people

If a person meets the eligibility criteria for both cadmium and arsenic, he or she can have both arsenic and cadmium tested in their urine.

How many homegrown vegetables can be tested?

We can only test 15 samples of homegrown vegetables.

When will the testing happen?

We plan to begin testing in your area the week of June 16, 2003. A member of our exposure investigation team will call you before we begin testing. If you meet additional eligibility criteria, they will set up a time that is okay for us to come to your home. Appointments should take about 1 hour. When we come to your home, we will explain the testing in more detail, collect the urine or vegetables you give us, and answer your questions.

When should we expect the results?

We expect to provide you with your results in about 4 to 6 months after the last testing. The last testing will probably be in August. It will take 4 - 6 months because the urine and vegetable samples will be handled by different labs. We will give you the results and a written explanation of what they mean. Finally, we will come back to the area and meet with you again and answer any questions you may have.

If you are interested in participating, please call:

MDHSS: Call toll-free: 1- 866-628-9891, ask for Lori Harris-Franklin or Rachelle Kuster.

For more information about the exposure investigation:

ATSDR: Please call toll-free: 1-888-42-ATSDR, ask for Dr. Ketna Mistry.